

GPS Network to Help Growth of Yangtze River Delta

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CHINA, August 12, AsiaPort -- Shanghai has developed a comprehensive application network for a global positioning system (GPS) covering the Yangtze River Delta, designed to assist weather reporting and aid the sustainable growth of this metropolis and neighboring areas.

"This network is crucial to improving the management of this area and the trial operation is proving successful," said Zhu Wenyao, a professor at the Shanghai Astronomical Observatory. "Beijing is also working on such a network."

The system includes a GPS Meteorological Observatory Network (MON) which is composed of 14 stations, five in the city and the other nine distributed throughout Jiangsu, Zhejiang and Anhui provinces.

MON provides near real-time monitoring of the water vapor levels of an area, in all kinds of weather, within 100 kilometers of a station. Measurements are taken at 30 minutes intervals with a high accuracy of within 2 millimeters.

The data collection of the Shanghai Meteorological Bureau now depends on launching balloons within 300 kilometers at an interval of 12 hours. And the accuracy is often a target of public complaint.

"MON will greatly improve our capacity to monitor and forecast disastrous weather," Zhu said.

The comprehensive network also includes a three-dimensional City Survey Control Network (CSCN), with 50 points around the city. The accuracy of the measurements can reach within a centimeter.

Shanghai's existing control network was established in the 1960s using optical methods rendered ineffective by skyscrapers. The old system has failed to meet the demands of urban construction.

CSCN can also provide technical support and positioning data in order to apply GPS technology to city planning needs and land information needs.